



**Natural Resources  
Conservation  
Service**

**Suite 340  
One Credit Union Place  
Harrisburg, PA 17110**

September 4, 2007

**AGRICULTURAL WASTE MANAGEMENT FIELD  
HANDBOOK NOTICE PA-15**

**Purpose:** To transmit Design Guide PA-1 and Standard Spreadsheet PA-SS-008

The previous version of Design Guide PA-1, dated 6/96, had an incorrect downspout size. This has been corrected and a new version, dated 9/07, is enclosed.

Recently, an Excel spreadsheet was also developed to provide similar guidance for the design of roof gutters and downspouts. This spreadsheet has been designated PA-SS-008 and has been placed in the PA Engineering shared drive in the Excel Spreadsheet folder. To be consistent with this spreadsheet, some of the data in Design Guide PA-1 was adjusted.

As with all engineering drawings, spreadsheets, etc., if you do not have access to the shared engineering drive, but need and have the authority level to utilize these guides, contact your area engineer.

**FILING:** Remove AWMFH pages 10-2.1 & .2, dated 6/96, and replace with the enclosed page 10-2.1, dated 9/07. Make a pen & ink change to EFH page 5-30 to add PA-SS-008, Roof Runoff Management, 9/07. An updated spreadsheet list will be sent later.

If you have any questions regarding these materials, please contact the State Project Engineer, Alan Wood.

/s/ GARY P. SMITH, Acting

CRAIG R. DERICKSON  
State Conservationist

Enclosure

DIST: All holders of the Agricultural Waste Management Field Handbook



Natural Resources Conservation Service  
One Credit Union Place, Suite 340  
Harrisburg, Pennsylvania 17110-2993  
Ph. (717) 237-2100 Fax: (717) 237-2238

March 15, 2007

AGRICULTURAL WASTE MANAGEMENT FIELD HANDBOOK  
NOTICE PA - 14

Purpose: To Transmit Design Guide PA-#5: Wastewater Treatment Strip Design

Background: Standard PA-635, Wastewater Treatment Strip, establishes criteria for the design of vegetated filter strips to treat agricultural wastewater. The attached design guide provides a procedure for preparing the hydraulic and nutrient calculations to meet these design criteria. The tables and figures in the design guide simplify the calculations needed to complete the design. The guide provides flexibility for the designer to customize the dimensions of a filter strip/area to meet site constraints. While it simplifies the design process, care must still be taken to avoid potential discharge of wastewater. A design must still be approved by someone with the appropriate level of job approval authority.

Action: Remove the existing Design Guide PA-3 and file Design Guide PA-5 after page 10-66 in the Agricultural Waste Management Field Handbook. It can be copied and shared with employees of partner agencies who operate under the technical supervision of NRCS.

Previously circulated draft versions of this design guide shall be discarded.

File this notice at the front of the AWMFH and record the notice on the PA register.

/s/

CRAIG R. DERICKSON  
State Conservationist

Enclosure: Wastewater Treatment Strip Design

February 10, 2006

**AGRICULTURAL WASTE MANAGEMENT FIELD HANDBOOK  
NOTICE PA-13**

Purpose. To transmit Design Guide #PA-4: Animal Mortality Composting.

Background. Conservation Practice Standard PA- 316 provides criteria for sizing animal mortality composting facilities, and references Design Guide #PA-4 for the method to be used in calculating the size and number of composting bins or windrows. There are five worksheets included in the attached design guide, to cover the full range of animal types and composting methods permissible under the PA-316.

Action. The Word file attached to the electronic version of this notice should be printed and inserted after page 10-58 in Chapter 10 of the Agricultural Waste Management Field Handbook. Worksheets PA-ENG-316a through PA-ENG-316e can be copied as needed for use in designing animal mortality composting facilities. The sample operation and maintenance (O&M) plans can also be adapted to site specific plans that meet the PA-316 O&M requirements.

An alternative to the worksheets is the Excel spreadsheet attached to the electronic version of this notice. A separate worksheet is available for each animal type, using the tabs at the bottom of the spreadsheet screen.

File this notice at the front of the front of the AWMFH and record the notice on the PA register.

  
**ROBIN E. HEARD**  
State Conservationist

2 Enclosures



**Subject: Notice 12 - AWMFH**

**Date:** Thu, 16 Jan 2003 11:01:22 -0500

**From:** Mary Margaret Rhodes <Mary.Rhodes@pa.usda.gov>

**Organization:** USDA, NRCS

**To:** paall <paall@pa.usda.gov>

**CC:** Robert Gibson <rogibson@state.pa.us>, Robert Graves <reg2@psu.edu>, Douglas Beegle <dbb@psu.edu>, "David G. Wagner" <dgw4@psu.edu>, William Foose <william.foose@pa.usda.gov>

Agricultural Waste Management Field Handbook (AWMFH) Notice PA-12

Make a pen and ink change to Page 10-75.

Change the units for TMTS from ft<sup>3</sup>/day to lbs./day.

File this notice at the front of the AWMFH and record the notice on the PA register.

/mm

---

Mary Margaret Rhodes <Mary.Rhodes@pa.usda.gov>

**Subject:** [Fwd: [AWMIT] Re: AWMFH Ch. 10 error]

**Date:** Thu, 16 Jan 2003 09:51:43 -0500

**From:** "Timothy J. Murphy" <Tim.Murphy@pa.usda.gov>

**Organization:** USDA-NRCS

**To:** Gary Miller <Gary.Miller@paclarion.fsc.usda.gov>,  
John Zaginaylo <John.Zaginaylo@pabloombsbu.fsc.usda.gov>,  
Wayne Bogovich <Wayne.Bogovich@pasomerset.fsc.usda.gov>,  
Hosea Latshaw <Hosea.Latshaw@palebanon.fsc.usda.gov>,  
Wayne Carvell <Wayne.Carvell@palebanon.fsc.usda.gov>,  
Mary Margaret Rhodes <Mary.Rhodes@pa.usda.gov>

FYI:

Make this change on p. 10-75 of AWMFH.

MMR - please make a distribution of this notice to all PA holders of AWMFH.

TJM

----- Original Message -----

Subject: [AWMIT] Re: AWMFH Ch. 10 error

Date: Thu, 16 Jan 2003 08:02:42 -0600

From: William Boyd <William.Boyd@ar.usda.gov>

Reply-To: awmit@ftw.nrcs.usda.gov

Organization: NRCS

To: AWMIT <AWMIT@ftw.nrcs.usda.gov>,

jody.kraenzel@nsmcsun.nsmc.nrcs.usda.gov

References: <3E1DF2E2.F5184AA2@nsmc.nrcs.usda.gov>

<3E26B9DB.4633751@ar.usda.gov>

I am still not perfect.

The line on worksheet 10A-5 I should have referred to is line 10, not line 13.

The units are correct on both lines.

The only change you need to make is still the one on page 10-75 described below.

William Boyd

Little Rock ...

William Boyd wrote:

> Dave Moffitt and I agree that sometimes being perfect is difficult. As many  
> times as we have gone over the AWMFH we still find a few errors. Jody  
> Kraenzel (who is at the Soils Mechanics Lab in Lincoln) spotted this one  
> for us. I suggest you make a pin and ink change to your copy of the AWMFH.

>

> Jody Kraenzel wrote:

>

> On the design of an effective digester there is an error

> on p. 10-75 on determining the TMTS for equation 10-24. It should be in

> units of lb/day rather than ft<sup>3</sup>/day. The later doesn't allow for

> cancellation of units. This appeared in the original version 4/92 and

> also in the Revised Version July 1996.

>

> Thanks, Jody.

> on Page 10-75 change the units for TMTS from ft<sup>3</sup>/day to lbs./day.

>

> This is likely a typo error because I checked the worksheets, and it is

> correct on the worksheets.





Natural Resources  
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Suite 340  
One Credit Union Place  
Harrisburg, PA 17110

May 5, 2000

AGRICULTURAL WASTE MANAGEMENT FIELD HANDBOOK  
NOTICE PA-11

Purpose. To transmit Design Guide #PA-3: Vegetated Filter Area Design.

Background. Standard PA-393, Filter Area, establishes criteria for the design of vegetated filter area to treat agricultural wastewater. The enclosed design guide provides a procedure for preparing the hydraulic design calculations to meet these design criteria. The tables and figures in the design guide simplify the calculations needed to complete a design. The guide provides flexibility for the designer to customize the dimensions of a filter area to meet site constraints. While it simplifies the design process, care must still be taken to avoid potential discharge of wastewater. A design must still be approved by someone with the appropriate level of job approval authority.

Action. File Design Guide #PA-3 after page 10-66 in the Agricultural Waste Management Field Handbook. It can be copied and shared with employees of partner agencies who operate under the technical supervision of NRCS.

Previously circulated draft versions of the design guide should be discarded since there are substantive changes in this 5/2000 version.

File this notice at the front of the AWMFH and record the notice on the PA register.

A handwritten signature in cursive script, reading "Janet L. Oertly".

JANET L. OERTLY  
State Conservationist

Enclosure





Natural Resources  
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Suite 340  
One Credit Union Place  
Harrisburg, PA 17110

February 2, 1999

AGRICULTURAL WASTE MANAGEMENT FIELD HANDBOOK  
NOTICE PA-10

Purpose. To transmit Construction Guide #PA-1: Curing Compound for Circular Tanks.

Background. Specification 313, section 4.e. requires the use of concrete curing compound at a rate no less than one gallon per 150 square feet of surface. The quantities of curing compound required for the full range of standard circular concrete waste storage tank diameters and depths have been calculated and plotted on the attached figure.

Action. File Construction Guide #PA-1 as page 10-22.2 in the Agricultural Waste Management Field Handbook. It can be copied and shared with contractors as an easy means of determining how much curing compound they will need for any circular tank floor or wall (inside and outside).

Enter the bottom of the figure with the tank diameter, read up to the line for the floor or wall height, and read the gallons of curing compound on the left side of the figure. For example, a 70 foot diameter floor would need 26 gallons of compound. The walls of a 12 foot deep, 70 foot diameter tank would need 35 gallons of compound.

File this notice at the front of the front of the AWMFH and record the notice on the PA register.

*Janet L. Oertly acting*  
JANET L. OERTLY  
State Conservationist

Enclosure



United States  
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Suite 340  
One Credit Union Place  
Harrisburg, PA 17110-2993

June 24, 1996

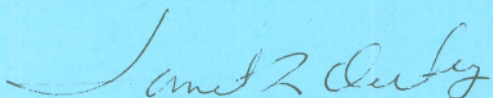
AGRICULTURAL WASTE MANAGEMENT FIELD HANDBOOK  
NOTICE PA-9

Purpose. To add a "Design Guide" to assist in the design of MWPS 74303 tanks. Also, to reclassify a previously provided "selection guide" to also be in the "Design Guide" series.

Background. The new Design Guide, #PA-2, has been developed to assist with the design of MWPS 74303 tanks which need top openings that do not conform to 74303. Any questions regarding the use of this guide or special cases which are outside the limitations of this guide should be directed to the State Design Engineer, Alan Wood.

In addition, as this guide is the second in what will probably become a series of design guides, the previously distributed "Selection Guide for Roof Gutters and Downspouts" is being renamed "Design Guide #PA-1: Roof Gutters and Downspouts", and is included herein.

Action. Replace pages 10-2.1 & 2.2 after page 10-2 in the AWMFH. Also add page 10-22.1 after page 10-22. File this notice at the front of the AWMFH and record the notice on the register.



JANET L. OERTLY  
State Conservationist

Enclosures

DIST: All Holders of the Agricultural Waste Management Field  
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United States  
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Suite 340  
One Credit Union Place  
Harrisburg, PA 17110-2993

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January 18, 1996

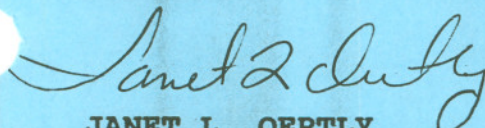
**AGRICULTURAL WASTE MANAGEMENT FIELD HANDBOOK  
NOTICE PA-8**

**Purpose.** To distribute AWMFH Supplement #5 Revised.

**Background.** Supplement #5, previously distributed, was found to contain an incomplete Index of Standard Detail Drawings. The Groffdale 92KW and Precise PC12UE drawings were missing from that index. The design data sheets for both of these drawings were previously distributed. The Northeast NTC issued the enclosed index revision which is accurate as of September 1995.

**Action.** Remove and replace the Index of Standard Detail Drawings at the end of Chapter 10 in the Agricultural Waste Management Field Handbook.

File this notice at the front of the AWMFH and record the notice on the register.



JANET L. OERTLY  
State Conservationist

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TJM  
Suite 340  
One Credit Union Place  
Harrisburg, PA 17110-2993

October 3, 1995

AGRICULTURAL WASTE MANAGEMENT FIELD HANDBOOK  
NOTICE PA-7

Purpose. To distribute Environmental Quality Technical Note N5, "Silage Leachate and Water Quality".

Background. The Northeast NTC recently issued the enclosed technical note which addresses the production and management of silage leachate as a water pollutant. This liquid can be very damaging to both surface and ground water quality, especially in undiluted concentrations.

The most important assistance we can provide is to prevent or minimize the problem. Site selection, clean water exclusion, and proper ensiling practices are far more cost effective than corrective actions.

The technical note also covers collection and treatment method which can be used to correct existing problems.

Action. File the technical note at the end of Chapter 4 in the Agricultural Waste Management Field Handbook.

File this notice at the front of the AWMFH and record the notice on the register.

*Sylvia Rountford, Acting*  
JANET L. OERTLY  
State Conservationist

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One Credit Union Place  
Harrisburg, PA 17110-2993

June 28, 1995

**AGRICULTURAL WASTE MANAGEMENT FIELD HANDBOOK  
NOTICE PA-6**

**Purpose.** To distribute an informational packet on the AgSTAR Methane Recovery Program.

**Background.** The United States was signatory to treaties that were developed at the 1992 United Nations Conference on the Environment and Development, more widely known as the Earth Summit. The Conference was held in Rio de Janeiro, Brazil, to develop strategies to reduce the methane emissions related to human activities to 1990 levels by the year 2000.

Methane emissions are believed to be contributing to the greenhouse gases that are causing global warming. This global warming is believed to be the result of significant amounts of methane emissions, which are attributed to manure storage and treatment facilities of Combined Animal Feeding Operations (CAFO's). To help reduce these emissions, the United States Environmental Protection Agency (EPA) has initiated the AgStar program.

**Memorandum of Understanding.** The Natural Resources Conservation Service and the Department of Energy are partners with EPA through a Memorandum of Understanding (MOU). A copy is enclosed. The MOU pledges cooperation to address the barriers to methane recovery and utilization in animal waste management systems. The enclosed packet provides further information on this program.

The Natural Resources Conservation Service is working closely with EPA in the development of practice standards that will provide criteria for the production and recovery of methane within agricultural waste management systems.

AgSTAR is suggesting these basic conditions for consideration:

1. Greater than 300 animals for dairy operations or greater than 500 sows.
2. ENERGY COSTS
  - Electricity costs exceeding \$0.07 per kwh or greater than \$30,000.00 annually.
  - Propane costs exceeding \$.75/gal. or greater than \$10,000.00 annually.

-more-



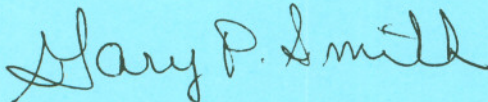
February 8, 1995

AGRICULTURAL WASTE MANAGEMENT HANDBOOK  
NOTICE PA-5

Purpose. To add a supplement to the "Selection Guide for Roof Gutters and Downspouts", which is in Chapter 10 of the AWMFH.

Background. This supplement adds another type of gutter, aluminum box ogee, to the design guide on gutters which was originally issued in May, 1994. This type of gutter has seen increased usage and consequentially the need for assistance with its design.

Action. File after page 10-2.1 in the AWMFH. File this notice at the front of the AWMFH and record the notice on the register.



WILLIAM HUNT  
Acting STC

Enclosures

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One Credit Union Place  
Harrisburg, PA 17110-2993

May 12, 1994

AGRICULTURAL WASTE MANAGEMENT FIELD HANDBOOK  
NOTICE PA-4

Purpose. To add the "Selection Guide for Roof Gutters and Downspouts" to Chapter 10 of the AWMFH.

Background. This guide was developed to improve the design process for roof gutters and downspouts. Since the hydraulics of the gutters and downspouts dictate that only a limited number of combinations are available for common material sizes and types, required rainfall, and gutter slopes, the table format was developed instead of the hard-to-read, log-log graph in Figure 1. of CP 558. A Technical Guide Notice will follow shortly that will rescind the use of that figure in CP 558 and instead, reference this table. If you have any questions regarding the use of this table, please contact your area engineer or Alan Wood, State Design Engineer.

Action. File after page 10-2 in the AWMFH. File this notice at the front of the AWMFH and record the notice on the register.

*Gary P. Smith*  
*Acting*

RICHARD N. DUNCAN  
State Conservationist

Enclosure

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Suite 340  
One Credit Union Place  
Harrisburg, PA 17110-2993

June 30, 1993

AGRICULTURAL WASTE MANAGEMENT FIELD HANDBOOK  
NOTICE PA-3

Purpose. To add the design data sheets for two series of standard detail drawings prepared by Sollenberger Silos, Inc. and concurred in by SCS.

Background. Bulletin PA-210-3-4 dated June 14, 1993 distributed design data sheets for drawings SSC-92-MT and SSC-92-MT-UB. The distribution should have been with this AWMFH Notice.

Action. As described in Bulletin PA-210-3-4.

File this notice at the front of the AWMFH and record the notice on the register.

*Richard N. Duncan*  
RICHARD N. DUNCAN  
State Conservationist

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The Soil Conservation Service  
is an agency of the  
Department of Agriculture

AN EQUAL OPPORTUNITY EMPLOYER



United States  
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Soil  
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Suite 340  
One Credit Union Place  
Harrisburg, PA 17110-2993

April 1, 1993

AGRICULTURAL WASTE MANAGEMENT FIELD HANDBOOK  
NOTICE PA-2

Purpose. To distribute the design data sheet for a new Standard Detail Drawing Prepared by Others, Concurred in by SCS.

Background. The Northeast NTC has concurred in the Precise Concrete Walls, Inc. drawing PC16CT, sheets 1 through 11, dated 12/28/92. The design is for Waste Storage Structures (Standard 313) with 16 foot high walls and 50 to 100 foot diameters.

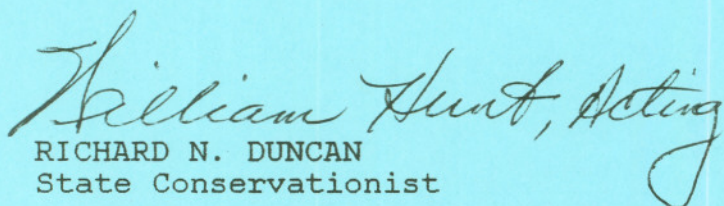
This design differs from previous drawings in requiring that the walls be installed in two placements. A construction joint with a water stop is shown on sheet 1 of the drawings. Concrete placement is still limited to 24" layers by SCS Specification 313. The approving engineer for a particular job can allow layer thickness up to 5' if superplasticizer is used.

A copy of the PC16CT drawings have been provided to each area engineer.

Action. The enclosed design data sheet dated March 15, 1993 should be inserted with the other design data sheets and the Index of Standard Detail Drawings which are filed at the end of AWMFH Chapter 10.

Make a pen-and-ink addition to the Index to show that the PC16CT drawing was concurred in as of March 15, 1993.

File this notice at the front of the AWMFH, and record the notice on the register.

  
RICHARD N. DUNCAN  
State Conservationist

Enclosure

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September 28, 1992

AGRICULTURAL WASTE MANAGEMENT FIELD HANDBOOK  
NOTICE PA-1

Purpose. To distribute part of the new Agricultural Waste Management Field Handbook (AWMFH), which replaces the Agricultural Waste Management Field Manual (AWMFM).

Background. The AWMFH provides guidance for planning, designing, and managing agricultural waste management systems. This technical reference is being completely rewritten to reflect research results and the summation of experience in agricultural waste management since the original AWMFM was written. The handbook is national in scope, and is not meant to supersede state references which are more attuned to local conditions and practices. The handbook should be used to supplement existing references.

Action. Remove old Chapters 1 through 13, the Conversion Factors and Tables, and the Glossary of the AWMFM and replace with the new Chapters 1 through 11, the Conversion Factors and Tables, and the Glossary. Add the Index to the back of the handbook.

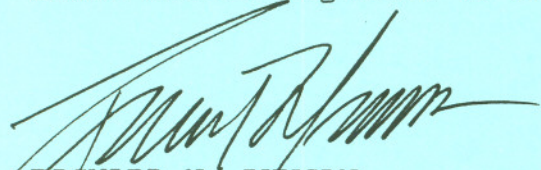
Retain Chapters 14 through 18 from the AWMFM until the new chapters are issued. Chapters 14, 16, and 17 should be filed behind the tabs for their respective chapters. Chapter 15 should be filed behind the tab for Chapter 12. Chapter 18 should be filed behind the tab for Chapter 13.

Pages 12-76.1 through 12-76.13, issued with Northeast AWMFM Notice N1 in November 1979, should be retained and filed after Chapter 10, Appendix 10C. The Northeast supplement provides more refined data for Pennsylvania and should continue to be used.

Pages 12-94 through 12-99, issued with Northeast AWMFM Notice N3 in March 1988, should be retained and filed after page 7-16.

The NTC Index of Standard Detailed Drawings by Non-SCS Engineers, and the design data sheets for the agricultural waste storage structure drawings should be filed at the end of Chapter 10.

This notice begins a new series of AWMFH notices. Enclosed is an AWMFH Notice Register to be filed in the front of the AWMFH.



RICHARD N. DUNCAN  
State Conservationist

2 Enclosures

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